The Connecticut Agricultural Experiment Station

123 HUNTINGTON STREET BOX 1106 NEW HAVEN, CONNECTICUT 06504

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December 28, 1987

Mr. Melvyn J. Weiss
Forest Pest Management
USDA Forest Service
Louis C. Wyman Forestry Sciences Lab.
P.O. Box 640
Durham, NH 03824

Dear Mr. Weiss:

Enclosed is information on insect pests and diseases of trees in Connecticut. We follow the gypsy moth, red pine scale, and hemlock wooly adelgid closely. They are serious pests that have great impact in Connecticut. The spring and fall cankerworms and oak leaf tier have been observed, but no damage has been reported. No activity has been noticed for forest tent caterpillars or saddled prominent. The European pine sawfly is moderately abundant statewide. Finally, the browntail moth is not present in Connecticut, and no new information is available on the remaining pests you listed.

You also requested information on diseases. I asked Dr. Gerald Walton of our Plant Pathology and Ecology Department for details. He told me that scleroderris canker is not known to occur in Connecticut. Beech bark disease has been observed in the towns of Killingworth (Chatfield Hollow), Hamden (Millbrook), Darien, and Washington. Diplodia tip blight is found statewide and causes substantial problems for landscape trees; there are no data for forest trees. It is believed that air pollution (ozone?) does affect white pine in southwestern and central Connecticut. Other commonly noted diseases were Rhabdocline needle cast on Douglas fir; leaf spots on ericaceous plants; anthracnose and leaf spot on dogwood; and scab on apples including crabapples. Unusual disease occurrences included stem rust on Scots pine and crown gall on privet. A late spring frost (May 13) injured maples, conifers, lilacs, grapes and oaks. During the winter of 1986-87, there were a number of substantial temperature fluctuations followed by several days of strong winds in March. As a result, a considerable number of evergreens, especially Rhododendrons, exhibited a foliar necrosis and some tip dieback.

I hope that this information helps you. As I mentioned in my letter of December 21, 1987, I received your request on December 18 and we have quickly tried to compile data. In the future, your requests for insect information should be directed to me. Dr. Donald Aylor is Department Head of Plant Pathology and Ecology. He should be able to provide current information on plant diseases. Finally, Dr. George Stephens, Head of our Department of Forestry and Horticulture, should be able to report on tree declines and losses.

Sincerely,

Louis A. Magnarelli

Louis A. Magnarelli, Ph.D.
State Entomologist

LAM/asj

Enclosure

News of Science

THE CONNECTICUT AGRICULTURAL EXPERIMENT STATION

123 Huntington Street • Box 1106 • New Haven, Conn. 06504 • (203) 789-7272

Defoliation caused by the gypsy moth decreased by about 50 percent in area and also in intensity during 1987, said John F. Anderson, chief entomologist at The Connecticut Agricultural Experiment Station in New Haven.

Defoliation was 127,452 acres as compared to 268,242 in 1986.

Anderson said western Connecticut remained free of defoliation by the gypsy moth, while collapse of the population due to a naturally occurring virus contributed to the decline in eastern Connecticut.

Although there was a slight increase in the acreage affected in Windham County, defoliation was less severe than in 1986. In 1987, 53,937 acres were defoliated in Windham County as compared to 51,168 acres in 1986. In New London County, total defoliation declined from 184,392 acres in 1986 to 53,937 acres in 1987, Anderson said.

Anderson said that populations of the caterpillars collapsed west of I-395 in New London County and east of I-395 in Windham County.

To help predict defoliation next year, the Experiment Station will survey egg masses throughout the state during the winter. But, based on the aerial survey, Anderson said "In most of eastern Connecticut, there will probably not be a major problem with the gypsy moth."

— more —

The areas defoliated in 1987 and the total area affected in each town are:

Hartford County: Marlborough (1560).

Middlesex County: East Haddam (1521) and East Hampton (39).

New London County: Bozrah (2457); Colchester (5226); Franklin (0); East Lyme (1872); Griswold (10,959); Groton (2106); Lebanon (3744); Ledyard (0); Lisbon (4641); Lyme (2301); Montville (4914); New London (0); North Stonington (468); Norwich (78); Old Lyme (507); Preston (2457); Salem (1560); Sprague (1443); Stonington (6708); Voluntown (12,246); and Waterford (2106).

Tolland County: Columbia (273) and Hebron (4329).

Windham County: Ashford (0); Brooklyn (7410); Canterbury (17,433); Chaplin (0); Eastford (0); Hampton (195); Killingly (7605); Plainfield (12,792); Pomfret (780); Putnam (2223); Scotland (975); Sterling (3120); and Thompson (1404).

There was no noticeable defoliation in Fairfield, Litchfield, or New Haven Counties, Anderson said.

The survey was made during the first two weeks of July by overflying the state and recording the locations where defoliation of 10 percent or more was observed. Staff working on the survey were Xavier Asbridge, Steven Sandrey, George Schuessler, and Peter Trenchard.

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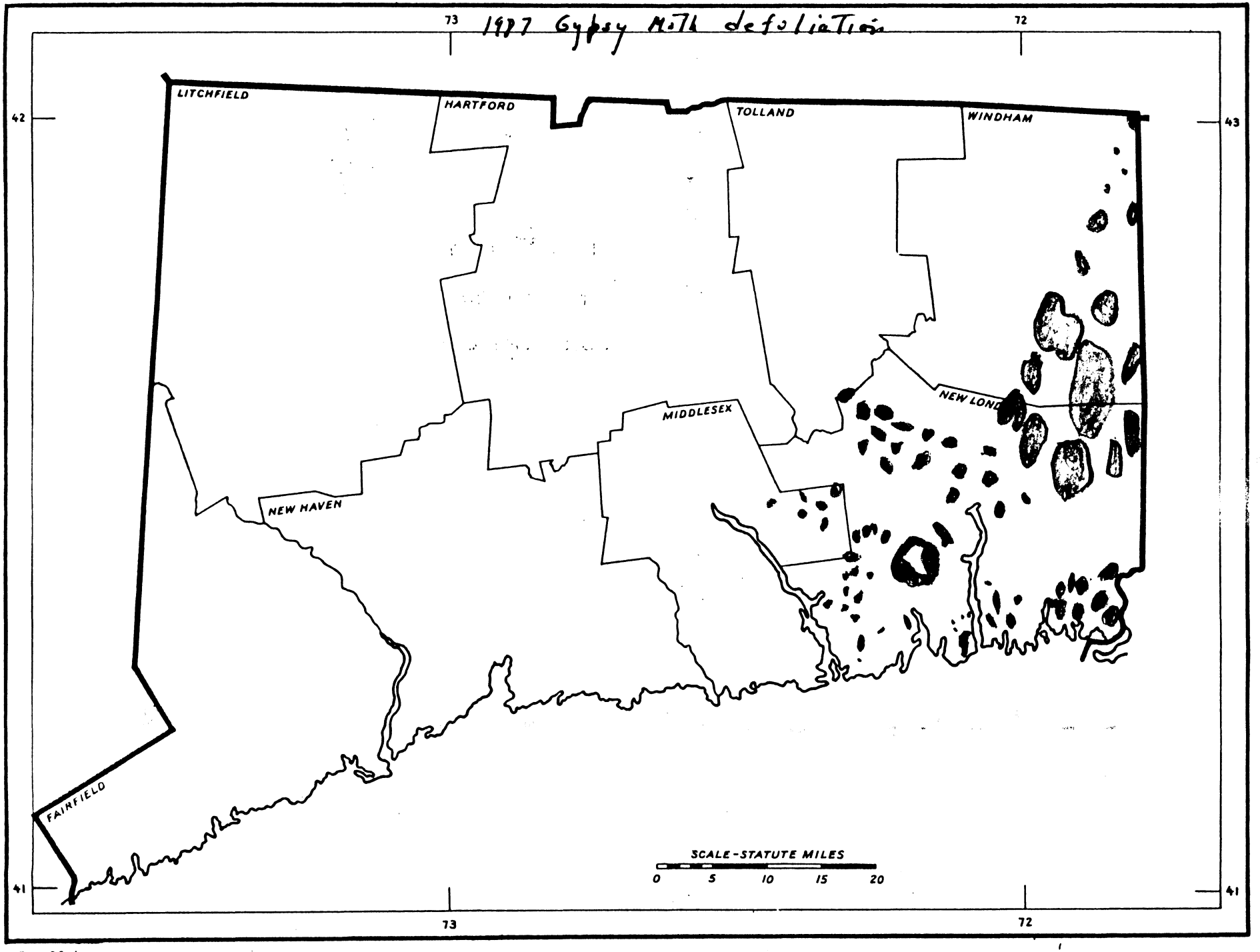
For more information, call John Anderson (789-7241), George Schuessler (789-7236) or Paul Gough (789-7223)

CONNECTICUT



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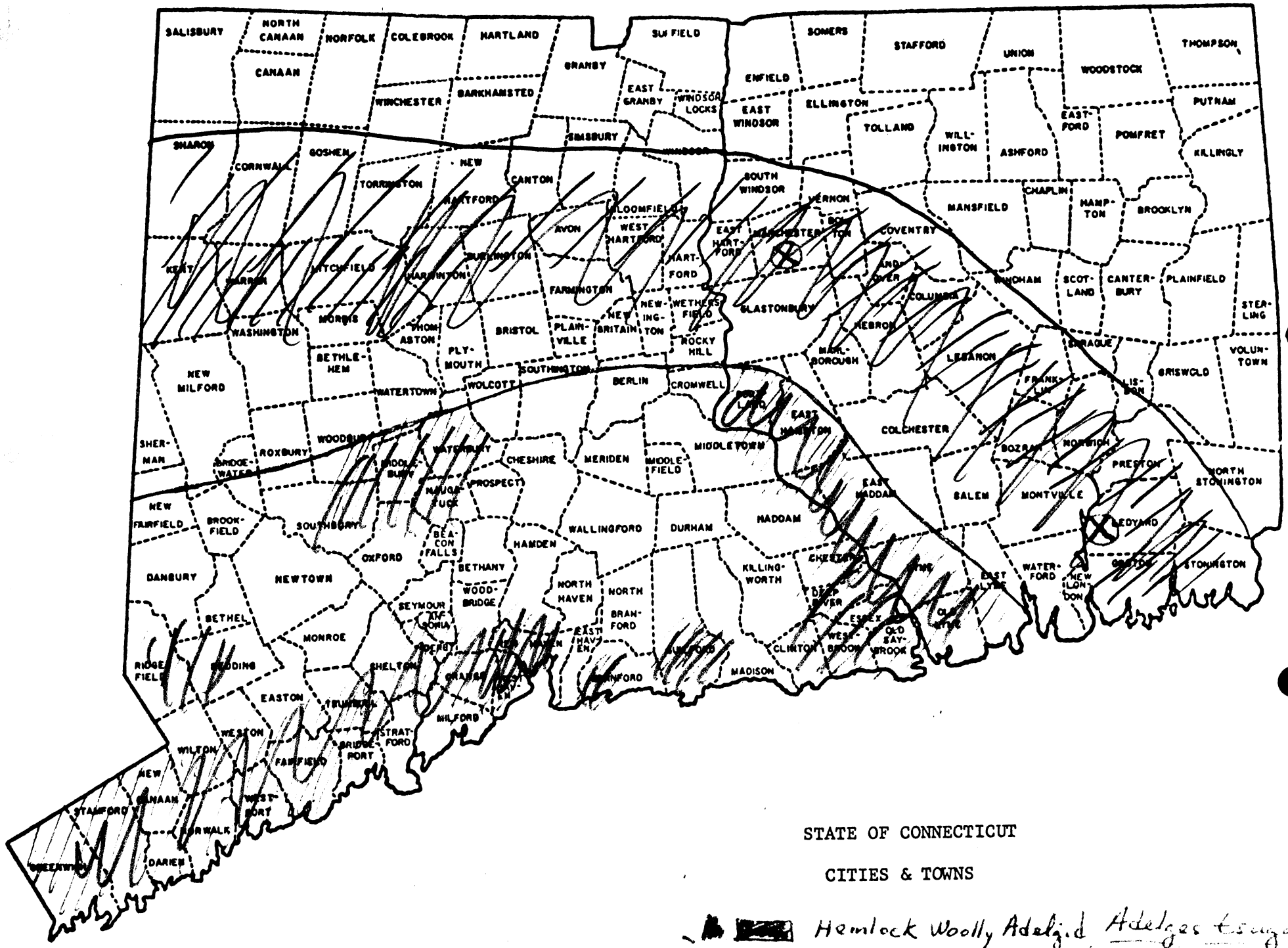


STATE OF CONNECTICUT

CITIES & TOWNS

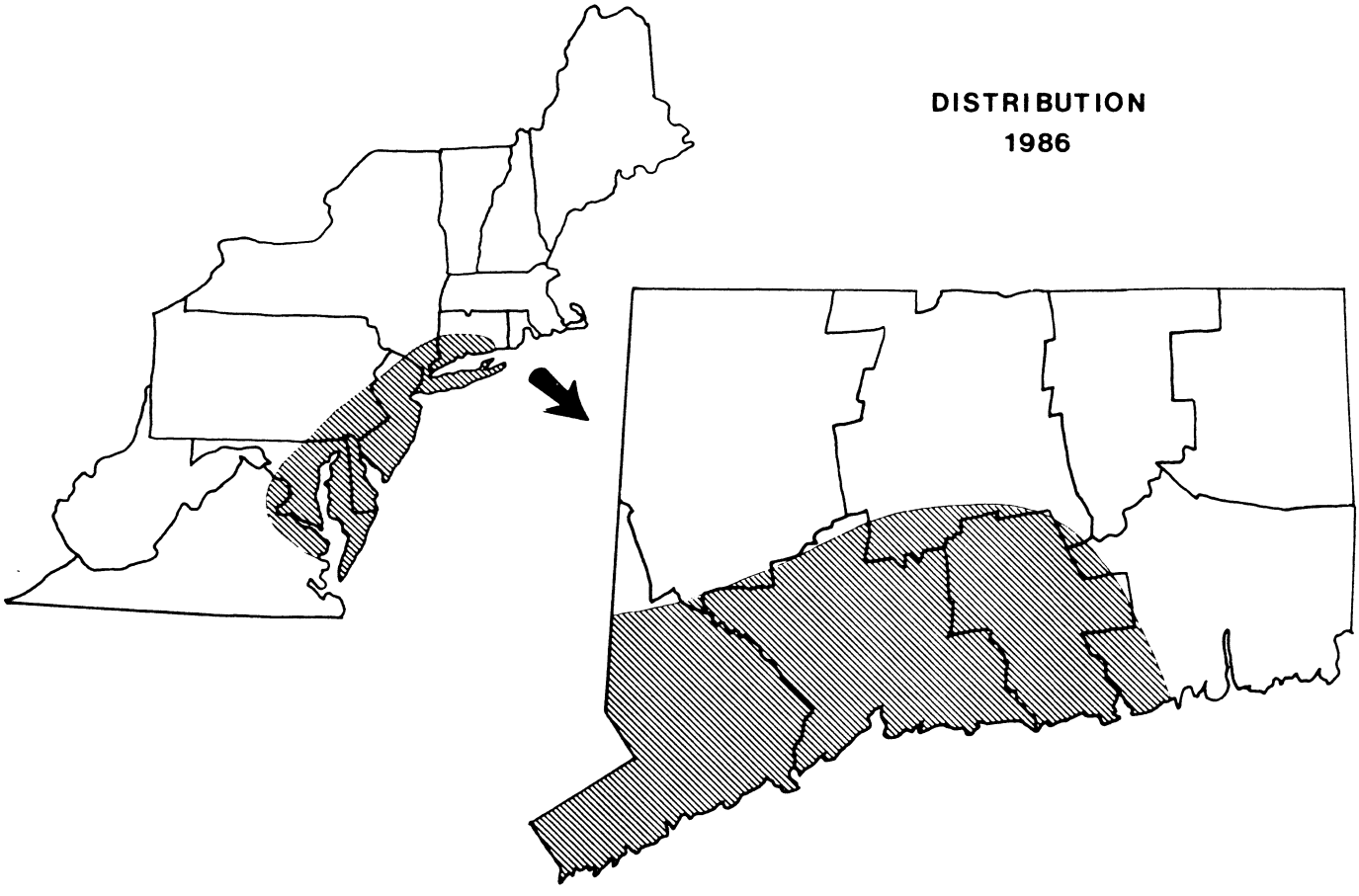
Hemlock Woolly Adelgid, Adelges tsugae

Red Pine Scale, Matsucoccus resinosae

CONTROL SUGGESTIONS

Hemlock woolly adelgid is a very difficult insect to control because of the long hatching period of the spring generation, the protection afforded by the cottony egg sacs and secretions, and the long period of inactivity during the summer by second generation nymphs. Spring applications of dormant oil and foliar systemics have generally been ineffective. The most effective time to control hemlock woolly adelgid, based upon literature, is when the second generation nymphs are maturing in October.

Products labeled for control include: Diazinon 4E, Diazinon AG500, and Diazinon 50W.



I am currently studying and monitoring populations of hemlock woolly adelgid in Connecticut and would appreciate knowing the location of any infestation in this and adjoining states.

Mark S. McClure, Entomologist
Tel. (203) 688-3647

HEMLOCK WOOLLY ADELGID, Adelges tsugae

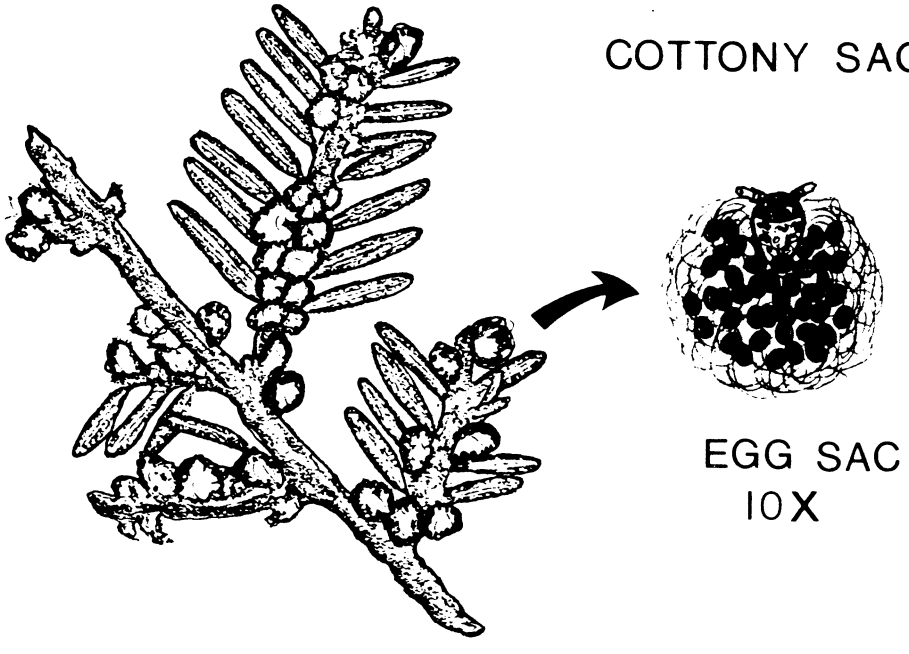
INTRODUCTION

Hemlock woolly adelgid (also known as hemlock chermes), probably of Asian origin, is a serious pest of eastern hemlock, Tsuga canadensis, in several Northeastern states. In the two years that this insect has been in Connecticut it has caused severe, irreversible damage to both cultivated and forest hemlocks. This adelgid feeds mainly on the young twigs by inserting its piercing and sucking mouthparts and removing sap. This causes premature needle drop, cessation of growth, dieback of branches, and death of trees.

LIFE HISTORY

The most obvious evidence of a hemlock woolly adelgid infestation is the conspicuous cottony egg sacs (resembling the tip of a Q-tip) present along the young twigs during most of the year. Overwintering females, which are dark, oval, soft-bodied and about 2mm long, lay their eggs from early March through June. Each female lays about 50 eggs within a single egg sac and then she dies alongside. Eggs are oblong, 0.3mm long and 0.2mm wide, and are brownish-orange. These eggs start to hatch in early April and most are hatched by June.

Newly hatched nymphs or "crawlers" are reddish-brown and about 0.3mm long. They settle on the young twigs where they feed and mature within a couple of weeks. Some of these individuals become wingless adults which produce a second generation on hemlock while others become winged adults, about 1.5mm long, which leave hemlock in pursuit of an undetermined host species. Crawlers of the second generation on hemlock migrate to the new twigs in July, settle, and then become inactive until mid-October when feeding and development resumes. Nymphs mature by winter and adults over-winter, thus completing the life cycle on hemlock.



COTTONY SACS ON HEMLOCK

EGG SAC
10X